



Ostrich farming

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Commercial ostrich farming began around 150 years back in South Africa, first for its feathers and recently for the hide. The hide is the product for which an established market exists, primarily in the Far East for the manufacture of luxury goods, although the meat is increasingly important to the economics of production. The ostrich is a credible competitor in the red meat market in that it produces a very lean red meat and the fat is low in cholesterol. There is only one true species of ostrich (*Struthio camelus*) although several subspecies do exist.

Ostriches are the largest living birds in the world. It derives its name from traits common to both ostriches and camels such as prominent eyes and eyelashes, large size and a remarkable tolerance for desert habitat. Native to Africa, ostriches are flightless, a characteristic they share with the emu, rhea and cassowary. The ostrich is the only bird to have only two toes on each foot. Emus, Rheas and Cassowaries, have three toes on each foot.

Ostrich are primarily grazing animals, existing on a variety of plant and brush materials. Succulent plants small insects and lizards and

fruits also make up a large portion of their diet. They prefer semi-arid short grass plains and can thrive on very poorly vegetated areas. Ostrich travel vast distances to obtain sufficient food and water. Ostrich are equipped with many advantageous features including excellent eyesight, large external ear canals, and powerful legs.

Physical Attributes

A male ostrich stands between 6 and 9 feet at maturity, while females will range between 5.5 and 6.5 feet tall at maturity. Ostrich chicks grow about 10 inches per month for the first year and weigh about 100 pounds at 12 months of age. Ostrich reach an adult height of over 7 feet by 16 to 18 months of age. They continue to increase in weight after this time with adult males reaching over 300 pounds. Ostrich may become sexually mature at 2 years of age although males often mature later than females. Females mature at about 2 ½ years while males at 3 ½ years on an average. It is not uncommon for hens to begin laying at 2 to 3 years of age while males may take as long as 4 to 5 years to be functionally mature. In captivity, females may lay as many as 100 eggs in a season, although 20 to 40 are more common. Eggs are whitish in color, weigh about 1000 to 1500 grams and are generally laid on alternate days.

Males have contrasting bright white and black plumage. Females' plumage is grey and drab. Ostrich of North Africa is taller, with longer neck and legs. Their lead-blue skin color usually becomes scarlet over the beak, on the forehead and around the eyes during the mating season. The normal body temperature range of the ostrich is between 103 and 104 degrees Fahrenheit. Ostriches are fast runners, and cover between 16 to 23 feet per stride and maintain speeds between 30 and 50 miles per hour for 30 minutes.

Space requirements

As a general rule up to 45 days of age, 0.1 m. sq. shelter and 1 m.sq. run space is provided. A quarter to half-acre area is required per breeding pair. Exercise is also very important in the life of a growing ostrich. From 1-2 weeks of age chicks should be spending over half their time walking around the enclosure





and feeding.

Incubation

The two methods of incubation namely, natural and artificial are being practiced. Both male and female ostriches share sitting responsibilities, usually the male at night and the female during the day. The nest will generally be a shallow depression in the ground. Greater egg production should result if eggs are removed from the nest each day. If artificial incubation is used, eggs should be gathered twice daily, stored with large ends up or on their sides, cooled to 65 to 70 F and placed in the incubator within 2 to 4 days. If eggs are not incubated within four days, hatchability usually declines. Eggs should be turned three times daily before to being placed in an incubator. The incubation period varies from 40 to 59 days.

Only clean, sound eggs should be incubated. If eggs must be washed, use water containing a sanitizing agent and keep water temperature 10° F warmer than the eggs. Pre heating is done up to 25° C for 12 hours before incubation. The temperature should be 36° C at 26 to 34 % relative humidity. The position during incubation is horizontal throughout.

Brooding

Chicks should receive continuous light and have access to the starter ration at all times during the first 3 weeks. After that, they can be fed all they will consume in two short (20 minutes) daily feeding periods. Chicks may also be given oyster shell or grit at this time. Supplementing the high protein starter ration with alfalfa will ensure that chicks consume adequate levels of essential nutrients while minimizing excessive weight gain which may contribute to leg weakness problems. Continuous lights are not required after chicks reach 3 weeks of age.

Nutrition

When chicks are 24 to 48 hours old they should be started on a good quality starter ration containing at least 18% protein. High fiber foods can cause intestinal obstructions in young chicks and result in 'starveout' deaths. Botulism or intestinal problems also occur.

Feeders should be open-type measuring about 48 inches long by 14 inches wide and 4 to 6 inches deep. The water pan should be 24 to 30 inches wide and 5 to 8 inches deep. Ostriches drink by scooping water with their beak. So they need a depth of water suffi-

cient to immerse their beak. Feeders and waterers should be mounted at the bird's chest height.

The nutritional requirements for efficient feed conversion have still to be established with any certainty. Nutrition is critically important in the economic viability of ostrich farming. In terms of nutritional requirements it is a true avian herbivore and is able to digest large amounts of fibre in the diet.

Sufficient fibre is essential for efficient digestion. Ostriches can obtain more than 50% of their energy requirement from fibre through the production of volatile fatty acids in the foregut and the hindgut. Passage of food through the digestive system of adult ostriches is around 48 hours, compared with 4-8 hours in poultry. The amount of feed required to bring a bird to slaughter weight is extremely variable and can range from 350 kg to around 700 kg. Given an average of 1.5-2kg of concentrate ration per day and a slaughter weight of 100kg, this would produce a slaughter bird for market at 6-8 months of age for a total feed cost of 350kg concentrate.

Breeding

The breeding seasons for ostriches begin in March and April and can last until September. Approximately two months before to the beginning of the breeding season birds should be separated into breeding pairs. Groups of one male and two female birds can also be penned together.

Products

The future viability of the enterprise will require the development of new products and markets for the highly durable and attractive leather, as well as increasing the existing demand for ostrich meat. It is claimed that some producers are already growing broiler birds to 140-150kg, yielding 40-50kg of meat by 14 months. At present the profitability of ostrich farming depends on the production of good quality hide. There is also potential for other value-added products from an ostrich enterprise like the fat, which can be rendered to produce oil, which is claimed to have therapeutic value in the treatment of skin complaints. It is also possible to produce extremely attractive ornaments.

Ostriches are now being farmed all round the world but the lack of an established industry infrastructure makes it impossible to be precise about market conditions.

